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"A cleansing pad"

5 This invention relates to cleansing pads, and in particular to wetted cotton wool cleansing pads for baby care, cosmetics removal and skin cleansing applications generally.

10 In our earlier patent application, Publication No. EP 0970674, we disclosed a makeup removal pad having a wad of absorbent cotton fibres sandwiched between two outer panels of porous cotton material. Also, US 4762124 discloses a liquid dispensing pouch having a liquid impregnated pad with a permeable membrane covered by a peel-away coversheet which seals the pad and is removed prior to use. While cotton wool has desirable characteristics for use in baby care and cosmetics applications, a disadvantage is that when wetted it tends to readily disintegrate.

15 It is an object of the present invention to provide a wetted cotton wool cleansing pad which is of simple construction which is robust and is easy and cheap to produce.

20 According to the invention there is provided a cotton wool cleansing pad, including a panel of hydroentangled cotton material having a dry weight in the range 50 – 400g per square metre impregnated with a cleansing liquid.

25 In another embodiment the panel of hydroentangled cotton material has a dry weight in the range 100 – 300g per square metre. In a further embodiment the dry weight of the hydroentangled panel is in the range 200 – 300g per square metre. In another embodiment the dry weight of the hydroentangled panel is in the range 200 – 250g per square metre.

30 Advantageously the invention provides a simple cleansing pad which is robust and easy to manufacture and use.

The cotton material is hydroentangled to a sufficient pressure so that the pad will not easily disintegrate in use, but nonetheless retains the softness, resilience and compressibility for which cotton wool is renowned. This hydroentanglement pressure

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Is noticeably greater than the normal hydroentanglement pressure used to produce conventional cotton pads.

5 Various different cleansing materials are possible. For example the cleansing liquid may simply be sterile water, or possibly a disinfectant, a baby lotion, a perfume or a medication.

10 Any suitable size and shape of cotton wool pad may be provided although it is envisaged that a rectangular pad may be most convenient from a manufacturing point of view. However, circular or oval pads might be provided if desired.

15 In another aspect the invention provides a cleansing strip comprising a plurality of interlinked wetted cotton wool cleansing pads joined together edge to edge by tear-away links.

Conveniently, the cleansing strip may be arranged in a stack in a zig-zag formation for mounting in a dispenser. Typically the stack is contained in a pack having a dispensing opening through which the cleansing pads are delivered for use.

20 In another embodiment the cleansing strip is arranged in a roll for mounting in a dispenser. Conveniently the roll is contained in a pack having a dispensing opening through which the cleansing pads are delivered for use.

25 Interlinking of the cleansing pads is advantageous from a manufacturing point of view and also in use for dispensing cleansing pads from a pack, removal of an outermost cleansing pad presenting the next cleansing pad at the dispensing opening ready for removal.

30 In another embodiment there is provided a process for forming a cleansing pad or strip of cleansing pads, including:

carding cotton material to form a web of carded cotton material,

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delivering the web of carded cotton material to a hydroentangling station, layering and hydroentangling at a desired hydroentangling pressure the carded cotton material web to form a hydroentangled cotton web of a desired strength,

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removing excess moisture from the hydroentangled cotton web,

Impregnating the hydroentangled cotton web with the cleansing liquid, and

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forming the pads or strip of pads from the impregnated hydroentangled cotton wool web.

In another embodiment the invention provides a process for forming a pack of the cotton wool cleansing pads herein described, the process including:

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forming an elongate strip having a plurality of interlinked cleansing pads,

moistening the strip of cleansing pads with the cleansing liquid,

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stacking the cleansing pads in a zig-zag formation, and

enclosing the stack of cleansing pads in a sealed pack.

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In another embodiment the process includes during moistening of the cotton wool cleansing pads by over-wetting the strip of cleansing pads and then squeezing out excess moisture from the strip of cleansing pads.

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In a further embodiment the process includes delivering the cleansing pads through a liquid bath for impregnating the cotton material with the cleansing material. This may conveniently be carried out as part of the hydroentangling process after hydroentangling of the cotton material.

In another embodiment there is provided a process for forming a pack of the cotton

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wool cleansing pads herein described, the process including:

forming an elongate perforated strip having a plurality of interlinked cotton
wool cleansing pads,

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stacking the cotton wool cleansing pads in a zig-zag formation,

wetting the stack of cotton wool cleansing pads with the cleansing liquid, and

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enclosing the wetted stack of cotton wool cleansing pads in a sealed pack.

The invention will be more clearly understood by the following description of some
embodiments thereof, given by way of example only, with reference to the
accompanying drawings, in which:

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Fig. 1 is a perspective view of a cotton wool cleansing pad according to the
invention;

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Fig. 2 is an end elevational view of the cotton wool cleansing pad shown in
Fig. 1;

Fig. 3 is a perspective view of a stack of interlinked cotton wool cleansing
pads.

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Referring to the drawings and initially to Figs 1 and 2 thereof, there is shown a
cleansing pad according to the invention indicated generally by the reference numeral
1. The cleansing pad 1 is formed by a rectangular panel 2 of hydroentangled cotton
material having a dry weight in the range 100-300g per square metre, said panel 2
being impregnated with a cleansing liquid such as sterilised water for example. If
desired the cleansing liquid may include a soap, a disinfectant, a perfume or other
liquid or ointment for cleansing or treating the skin.

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It will be noted that the cotton material of the panel 2 is hydroentangled to a sufficient

pressure so that the cleansing pad will retain its integrity even when wetted with the cleansing liquid.

Referring in particular to Figs. 3 and 4, in a preferred arrangement a plurality of the cleansing pads 1 are interlinked to form a strip of cleansing pads 1 with adjacent pads 1 joined together edge to edge by a perforated or tear-away link edge 4. The interlinked cleansing pads 1 can be conveniently arranged in a stack 5 in zig-zag formation as shown in Fig. 3, said stack 5 being arranged in a sealed pack 10 having a dispensing opening 11 through which the cleansing pads 1 are delivered for use. Typically a cover (not shown) is also provided to extend at least over the dispensing opening 11, or possibly the whole top 17. The pack 10 has a rectangular base 14 with upstanding side walls 15 terminating in an upper flanged rim 16 to which is bonded a top panel 17. The dispensing opening 11 is provided in the top panel 17, and may be elasticated to grip the pads 1 as they are pulled through to provide a seal and facilitate tearing away the outermost pad 1.

In use, a stack 5 of the pads 1 is contained in the sealed pack 10. Upon opening the pack 10 the first cleansing pad 1 is pulled through the dispensing opening 11 and torn away from the remainder of the strip along the tear-away link 4 as shown in Fig. 4. The cleansing pad 1 is then used in conventional fashion for baby care or cosmetics removal as required.

During manufacture of the stack 5 of cleansing pads 1 an elongate strip of interlinked cleansing pads 1 is formed of hydroentangled cotton material of the required weight. Then the strip may be moistened with the cleansing liquid and subsequently stacked in the zig-zag formation or alternatively the cleansing pads 1 may be stacked in the zig-zag formation and then moistened with the cleansing liquid prior to enclosure in a sealed pack.

Instead of zig-zag folding the strip may be rolled up. This arrangement is shown in Figs. 5 and 6. Parts similar to those described previously are assigned the same reference numerals. In this case the strip of pads 1 is wound into a roll 20. Fig. 6 shows the roll 20 mounted in a pack 10 with a leading pad 1 partially pulled through

the dispensing opening 11.

While the cleansing pad 1 has been described herein for baby care and cosmetic applications it is envisaged that if impregnated with a suitable cleansing liquid or detergent the pad 1 might be used in general cleaning applications also.

It will be appreciated that the wetting of the pads or strip of pads may be carried out at any suitable stage of the manufacturing process. For example the wetting may be carried out either before or after the stacking or rolling of the strip of pads. Conveniently the wetting may be carried out as part of the hydroentangling process, after hydroentangling of the cotton material.

The invention is not limited to the embodiments hereinbefore described which may be varied in both construction and detail within the scope of the appended claims.

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